

# DOCUMENT RESUME

ED 059 839

RE 003 999

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TITLE Word Attack Skills and Perception--A Programmed Approach.  
PUB DATE Dec 71  
NOTE 16p.; Paper presented at the National Reading Conference, Tampa, Fla., Dec. 1971  
AVAILABLE FROM National Reading Conference, Inc., Marquette University, 1217 W. Wisconsin Ave., Milwaukee, Wis. 53233  
EDRS PRICE MF-\$0.65 HC Not Available from EDRS.  
DESCRIPTORS Concept Formation; Independent Study; \*Junior College Students; \*Phonics; \*Programed Materials; Spelling; \*Word Recognition; \*Word Study Skills

## ABSTRACT

An instructional package was developed to help junior college students weak in word attack skills related to phonics and the ability to discriminate by the most efficient use of the auditory, visual, and analytical faculties. The programed package was designed to permit the student independence and privacy and to introduce a rapid and emotionally satisfying process for developing the needed skills. Habits and misconceptions regarding spelling and pronunciation observed in the behavior of the students were identified, together with other emotional dilemmas. Through working with individuals, 20 generalizations and skills which the students needed for more efficient word attack were selected. The objectives to be achieved were presented in the following order: accented syllable, unaccented syllable, syllabication, vowel diagraphs and diphthongs, consonants and consonant blends, flexibility, and the dictionary. A pretest and post-test for each of the objectives was developed. It was recommended that the package be used with other informal and personal aids and especially with wide and continuous reading. References are included. (AW)

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## Word Attack Skills and Perception--A Programmed Approach

Statement of the problem. Each semester some 12 percent of the students enrolled in either our reading or study skills courses at Hinds Junior College express a need for help with spelling and pronunciation. The faculty regularly refers certain students to the reading department specifically recommending that the student overcome his deficiency in spelling. Since apparently the techniques and systems offered the student in his pre-college schooling failed for one reason or another, we wanted a different approach. We wondered what other colleges offered such students.

Other institutions. The universities that we contacted including the University of Mississippi and Purdue refer such students to the reading clinic or the School of Education for individual diagnosis and remedial instruction. Contacting twelve colleges in a consortium of community colleges representative

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of various areas, we heard from eight representing colleges in North Carolina, Michigan, New Mexico, Missouri, and Colorado. Neither the material used nor the objectives listed show any recognition of the problem. Geerlofs (3) analyzed statistics from 90 reading centers in forty states in 1965. Twenty-one institutions ranked vocabulary and word attack skills as highly important. Materials listed in the study suggested that the emphasis is on vocabulary and not word attack skills. A more extended survey of 246 colleges, universities, and reading clinics from 46 states and the District of Columbia is reported in the Journal of Reading by Geerlofs and Kling (4) with similar conclusions. Price (11) in a similar survey of 546 colleges found eleven involved with Basic Studies. The material and texts listed indicate little or no attention to the problem. Colvin's survey of Pennsylvania colleges (2) found two colleges concerned with perception and mechanistic aspects of reading. We assume this was practiced in rapid assimilation of phrases and speed drills. Neither the description of commercial tests, workbooks, teacher-prepared materials, nor teacher training indicate a specific attention to perception.

Related research. Reviews of research found in the Reading Research Quarterly from 1965 to 1971 indicate very little investigation in either word attack skills or the spelling difficulties of college students. Bliesmer in his 1969 review of research in the Nineteenth Yearbook of the National Reading Conference mentions a dissertation abstract by Magee (9). Instruction in phonics did not produce gains in spelling skills of college students even though the students gained in phonics knowledge. In an annotated bibliography Summers (10) quoted the conclusion of the same writer: "It was found that a higher degree of skills in phonics correlated positively with better reading."

Phonics instruction at the college level would appear to produce gains in phonics ability."

Studying 1,652 freshmen Brown and Cottrell (1) administered their own test, the California Phonics Survey. They found that the lower the phonics score, the less chance of an adequate reading score and that those really low in phonics, score only low in reading. The same study ". . . produced correlations between phonics and reading that are significant at the .01 level of confidence at each of three institutions sampled" when the students' phonics scores were correlated with three subtests (Vocabulary, Speed of Comprehension, and Level of Comprehension) and the total score of the Cooperative C2 Reading Test (1, p. 11). Most college instructors will agree with their observation that when sight words such as though or thought are confused, the confusion is so deeply embedded as to be extremely difficult to overcome (1, p. 22). Interpreting test results, the authors state: "Ten errors made by a student of high verbal ability and good academic standing are far more likely to imply real phonic disability (for which the student may have compensated in other ways) than ten errors made by a student having a low academic standing, a poor vocabulary, and very little reading experience" (1, p. 23).

In a study of the role of grapheme-phoneme correspondence as related to perception of words Gibson (5) and others concluded that skilled readers are aided in perception by the grapheme-phoneme correspondences of the English language.

Review of the research. Jackson (7) notes the lack of research in the area of word perception and word attack and suggests that the area "merits

extensive and more exacting research" (7, p. 124). He suggests, "If perceptual-motor performance itself should improve following the reading course, then there would be evidence that it is not invariably produced by irreversible organic impairment, even in adults" (7, p. 126). Excellent discussions in the area of discrimination as it relates to processes and training are welcome additions. The preceding topics are developed by Greene, Geake, Smith, and Clark (16).

For the college instructor interested in an analysis of modern English and spelling to sound relationships, we recommend Venezky's article (15) in the Spring Edition of the Reading Research Quarterly. His analysis was helpful to us in developing our package, particularly his description of long and short sounds which he prefers to describe as free and checked. Of numerous college texts and workbooks examined, we identified three that provided some aid to students in the area of phonics. Spache and Berg (14) approached the area through the use of the dictionary; Sherbourne (13), and Jones, Morgan, and Petty (8) through a summary of useful phonics generalizations combined with drill. In our opinion a student would need to be highly motivated and possess unusual verbal aptitude to profit from these sections.

Definition of perception. Of many definitions found in current journals, we prefer those that recognize the emotional nature of the learner. The global view of perception is represented by an array of articles in the Third and Fourth General Yearbook of the North Central Reading Association (16). Greene's discussion (6) of literal and schematic perception should be helpful to anyone devising a package of materials designed to increase perception. For the purpose of developing our package, we define perception as the

process of scrutinizing a word or syllable in order to react to its spelling sequences and to predict its probable sound by observing its surroundings. One of our more important objectives is to reinforce the student's tendency to use an orderly analytical process. A second objective is to increase the student's appreciation of and confidence in his own auditory, visual, and mental equipment.

Working with students to improve spelling and pronunciation convinces us that only a few habits and misconceptions result in the poor spelling, slow reading, skipping of significant words, or lack of confidence which results from inability to pronounce unfamiliar words. The habits and misconceptions which are easy to observe in the behavior of these students are:

- 1) Various confusions resulting from having learned and misapplied the expression "a vowel preceded by a consonant."
- 2) Failure to notice whether the consonant is part of a consonant blend or part of a vowel spelling such as an ar, or, or ire.
- 3) An inadequate appreciation of the value of the student's own hearing and visual ability.
- 4) Failure to correlate and observe the sequences of sounds heard in a syllable and the letter sequences that represent those sounds.
- 5) Vague and inadequate notions about the role of the accented and unaccented syllable.
- 6) Frustration and rejections of any generalizations

concerning word attack because generalizations taught in pre-college schooling failed to work. For example, a student dutifully learns that a vcv sequence is a cue to a long vowel before the consonant because the first vowel will be the last letter in the first syllable without realizing that there are two other possibilities: 1) the arrangement may represent a syllable that ends with a consonant and contains a short vowel, e.g., esoteric and novice; and 2) although the syllable may end in a vowel, the syllable may be unaccented in which case the vowel sound is likely to be schwa, e.g., amalgamate, anoxia, peruse, and parity. Over emphasis has made the student feel he has a principle that is universally true until he observes many discrepancies. Only the highly analytical and determined student extricates himself from his confusion.

Besides these learned behaviors, the junior college teacher is confronted with several other dilemmas more of an emotional nature than intellectual. The student is sensitive about his problem. If the approach reminds him of an elementary method, he will not persist. If, on the other hand, the approach is complex and intricate, the student is frightened and repelled. But the fact that the student has enrolled tells the instructor that the student is motivated and has some emotional fortitude because in our area the adult continually treats the subject of college reading in a rather derogatory manner.

Selection of learning objectives. In selecting the learning objectives, we looked for generalizations that had four characteristics: 1) The generalization was either unknown to the typical student or if known was not being used. 2) The principle would be useful and could be immediately applied to the spelling and pronunciation activities of the student. 3) The student could demonstrate his mastery of the principle to his own satisfaction. 4) Each successive principle learned would reinforce those learned earlier.

To identify the generalizations to be taught, we worked with individuals. We listened to an individual read; and when he mispronounced a word, we asked him to describe what he had done to arrive at the pronunciation. We identified a word frequently misspelled by a particular student and asked him to tell us what he saw when he looked at the word. We analyzed errors made on the California Phonics Survey test. We became aware of the most frequent misconceptions and what seemed to be misdirections in word attack.

From the information gained by the process, we selected some twenty generalizations and skills which our students needed for a more efficient attack on words. Each generalization to be programmed was selected only if it could contribute to learning by encouraging the student to: 1) hear in an orderly way, e.g., the first syllable, the second syllable, the third syllable . . . 2) see in an orderly way; 3) observe, analyze, and generalize; 4) be flexible in scrutinizing a word for cues to pronunciation or spelling; 5) review and apply the skills and generalizations learned in preceding objectives.



Our next step was to develop a pre and post test for each of the objectives. The tests developed may be worked and scored by the student within three minutes or less. We hoped the student would see what he needed to learn and be motivated to apply what for him would be a new behavior. At the same time, we selected certain reading techniques and presentations that would meet two criteria: 1) the student must respond favorably; 2) the presentation must aid the student to a rapid assimilation of the skill or generalization.

We worked with small groups presenting the generalizations in various sequences, learning as we did so which sequences caused confusion or negative reactions from students. The sequence we evolved enabled us to begin auditory and visual training with words selected from college textbooks. We started with whole words and moved to parts. Examples and words were often incorporated in pairs of sentences using linguistic procedure and examples. By a careful selection of examples, we succeeded in neither repelling nor intimidating the student. The student working through the sequence could discover the interrelationships of sound and spelling without becoming permanently stuck at some discrete element of the verbal and auditory signals presented.

What the student does. In a series of individual and group conferences, the student decides which of the specific exercises he needs in order to improve. He analyzes his scores on the California Phonics Test and checks on a chart the specific objectives he will achieve at a regularly scheduled laboratory period. He works with a cassette player and recorder. Instructed by the audio tape, he reads the learning objective with an illustration of what he is expected to perform. He takes and corrects a pretest which can

be completed in three minutes or less. Continuing with the exercises, he is instructed to use manipulative material in order to achieve his objective. The manipulative material may be a set of cards, a filmstrip, or an exercise. The concept is frequently presented in sentences that reveal contrasts in meaning as well as the visual cues to the nature of the cues to pronunciation. After about five minutes of observation and experimentation, he takes and scores a posttest. If he cannot score 100% or is not satisfied with his behavior, he continues to work using a different approach or he discusses his problem with the instructor.

We begin with the accented syllable because there is virtually no working understanding of accent. The student readily appreciates the significance of this feature of the language; and because he grasps the concept easily, he gains some much needed confidence. Each of the succeeding objectives are naturally related to accent. With initial success insured, the student is willing to attempt the other objectives. The objectives achieved by the student follow:

#### Unit One - The Accented Syllable

1. Reacts to accent on hearing a multisyllable word.
2. Reacts to accent on seeing a visual cue to accent.
3. Generalizes that syllables alternate in a pattern of emphatic and less emphatic sound units.
4. Observes that certain suffixes are cues to accent.
5. Observes the tendency to indicate the part of speech by shifting the accent from one syllable to another.

## Unit Two - The Accented Syllable

### Long and Short (Free and Checked; Open and Closed) Vowels

1. Identifies the vowel and auditory cue by giving the alphabetic name, its position in the syllable, and by describing it as long or short, free or checked, or open or closed.
2. Predicts the sound of the vowel and pronounces the syllable from a visual cue.

## Unit Three - The Unaccented Syllable

1. Reacts to schwa by identifying the unaccented from an accented syllable.
2. Generalizes that any one of the vowels may represent schwa and identifies schwa in a familiar three syllable word.

## Unit Four - Syllabication

1. Identifies the number of syllables first from auditory cues and second from visual cues.
2. Reacts to vv, vev, vccv, and vcev sequences as cues to syllabication and the possible sound of the vowel.

## Unit Five - Vowel Digraphs, Vowel Diphthongs,

### Vowels Affected by R

1. Reacts to auditory cues and visual cues.
2. Discriminates between vowel diphthongs and vowel digraphs.
3. Discriminates between vowel diphthongs and long and

short sounds.

Unit Six - Consonants, Consonant Blends,  
Consonant Digraphs

1. Reacts to consonants with which he is not familiar by observing and listening to the sound in words he wishes to spell.
2. Blends the consonant when encountered in unfamiliar words, or when encountering a digraph, reacts appropriately.

Unit Seven - Flexibility

1. Develops rules of his own by noting the repetition of certain other sequences in a series of words, e.g., rhizome, Rhesus.
2. Scrutinizes a pair of words similar in spelling in order to locate the syllable that is different and demonstrates awareness of the difference in spelling by writing the syllable in contrasting colors.
3. Pronounces a nonsense syllable that sounds like a real word but is not spelled like a real word.

Unit Eight - The Dictionary

1. Uses what he has learned to pronounce an unfamiliar word when the syllabication and accented syllables have been indicated.
2. Compares and contrasts the diacritical marks of several dictionaries.

3. Pronounces an unfamiliar word by reacting to the diacritical symbols.

Concluding statements. We do not feel that immediate improvement in spelling can be used as a measure of the usefulness of an increased awareness of generalizations even though students insist they have improved, often dramatically. If the test used is a general or standardized test, it has been noticed by various writers that a vocabulary improvement course rarely results in significant improvement in scores earned. A better test in our opinion would be how many words frequently misspelled in various courses in the first few weeks of the semester have been mastered. A second measurement might involve noting the improvement in the reading of a comparable passage at the end of the course. The two selections should be of comparable difficulty and subject matter. The paper should contain words testing the ability to discriminate and apply the generalizations. To be sure that the test words are unfamiliar to the student, words from both passages would have to be administered in either a passage or list, and the category of errors recorded. Some criteria for judging that the student is applying and discriminating would have to be developed. The student who mispronounces al ter' na tive, al ter na' tive is discriminating well. He has just misplaced the accent. The student who pronounces the same word as al tre' na tive is confusing the er with re and discriminating with much less efficiency. There are other problems. With semantic, syntactic, and meaning cues provided by the passage, the student would probably correctly pronounce words in one passage which he would miss in a list or a different passage. Despite the problems, we believe such a study would be useful.

In any case we do not think that our package, useful as it is, can be used alone. Used with other informal and personal aids and especially with wide and continuous reading, the package should be an invaluable tool in meeting the needs of the college student properly diagnosed as weak in word attack skills related to phonics and ability to discriminate by the most efficient use of the auditory, visual, and analytical faculties.

To recapitulate, we developed our package to meet certain needs of the junior college student who refers himself or is referred for help with either spelling or pronunciation difficulties. We are convinced that such a package must be designed to permit the student: 1) independence and privacy and 2) a rapid and emotionally satisfying process for developing new responses or substituting effective responses for ineffective reactions. Approaches that strike the student as elementary repel him; procedures that require the student to budget large parts of his day to the achieving of a given objective are impractical as are procedures that require continuous supervision by the instructor. The junior college student is often a commuter and a wage earner. If he lives on campus, he spends as many hours as his commuter counterpart in extracurricular activities. A generation conditioned to instant light and instant oatmeal expects instant learning. Our program is designed to meet the student at least half way in providing for his needs and his expectations.

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